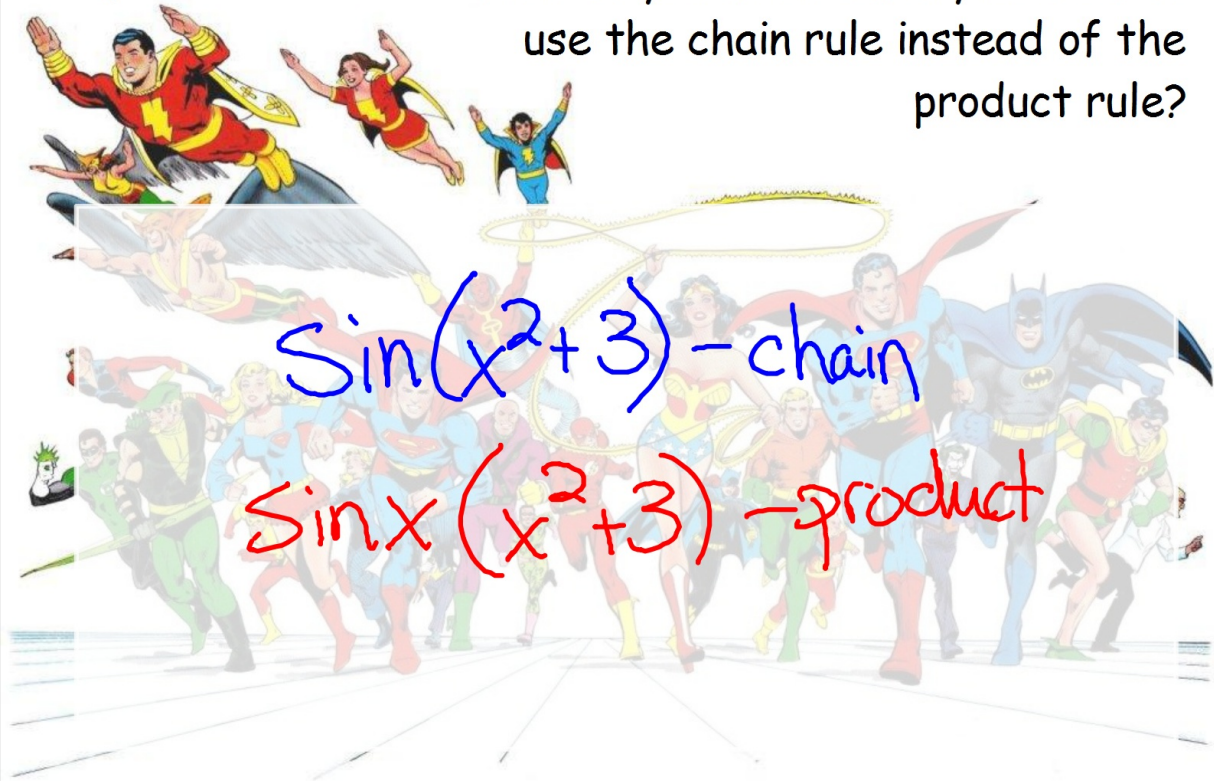


September 25

How do you know when you need to  
use the chain rule instead of the  
product rule?



September 25

Students will verbally explain how to  
find the derivative

(using the words:  
function, exponent, coefficient...)

☺ Derivatives - Power Rule, Product Rule, Quotient Rule, Chain Rule

☺ Definition of the Derivative

☺ Equation of a tangent line

☺ Limits

$$y' = 4(\sin(\sqrt{x^3-5}))^3 \cdot (\cos(\sqrt{x^3-5})) \cdot (\frac{1}{2}(3x^2)^{-1/2})$$

$$y = (\sin(\sqrt{x^3-5}))^4$$

$$y' = 4(\sin(\sqrt{x^3-5}))^3 (\cos(\sqrt{x^3-5})) (\cos(-3x^2))$$

$$y' = 4(\sin(x^3-5))^{3/2} (\cos(x^3-5))^{1/2} (3x^2) \cdot \frac{1}{2}(x^3-5)^{-1/2}$$

$$y = \sin^4(\sqrt{x^3-5})$$

$$y = (\sin(x^3-5)^{1/2})^4$$

$$y' = 4(\sin(x^3-5)^{1/2})^3 \cdot \frac{1}{2}(x^3-5)^{-1/2} (3x^2)$$

$$y = (\sin(\sqrt{x^3-5}))^4$$

$$y' = 4(\sin(\sqrt{x^3-5}))^3 (\cos(\sqrt{x^3-5}))$$

$$\left(\frac{1}{2}(x^3-5)^{-1/2}\right) (3x^2)$$